UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,747	05/19/2004	Peter Stokes	CLIP014US	8577

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CREATIVE LABS, INC.
LEGAL DEPARTMENT
1901 MCCARTHY BLVD
MILPITAS, CA 95035

EXAMINER
ZHEN, LI B

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05 March 2008</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-13</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-13</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 13 are pending in the application.

Response to Arguments

2.   Applicant's arguments with respect to the claims have been considered but are

moot in view of the new ground(s) of rejection.

Specification

3.   The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: the specification does not provide proper antecedent basis

for "computer readable medium".

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

5.   Claims 1 – 13 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 1, 8 and 9 recites a "computer readable medium" and the specification

fails to provide antecedent bases for this limitation [see objection to the specification

above]. Without antecedent basis for "computer readable medium", it is unclear if the

limitation intended to be the same as the storage media described as part of the

disclosed program product or whether it's intended to be broader than the disclosed

storage media. It is believed that the limitation "computer readable medium" is intended

to claim something broader than the disclosed storage media and cover signals, waves

and other forms of transmission media, that carry instructions. Therefore, the limitation

"computer readable medium" is not limited to physical articles or objects which

constitute a manufacture within the meaning of 35 USC 101 and enable any

functionality of the instructions carried thereby to act as a computer component and

realize their functionality. As such, the claim is not limited to statutory subject matter

and is therefore non-statutory.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

8.   **Claims 1 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over U.S. Patent No. 6,298,370 to Tang et al. hereinafter [Tang, previously cited] in

view of U.S. Patent Application Publication No. 2002/0110150 to Keys.

9.   As to claim 1, Tang teaches a software-implemented arrangement [Windows

Driver Model; col. 35, lines 28 – 41] for driving at least one hardware device [audio

hardware; col. 35, lines 8 – 29] of predetermined functionality from an operating system

[col. 14, lines 10 – 26] that communicates with an installed driver for said hardware

device [WDM Comm Class Driver supports other legacy comm functions; col. 99, line

65 – col. 100, line 6], and a device driving system enabling operation of at least one

further hardware device of functionality differing from said predetermined functionality

and unsupported by said software system [an ActiveDSP audio renderer filter accepts

PCM, MPEG, or AC-3 audio streams, and passes the streams through

DirectDSP/DirectDSP HAL to VSP hardware for decoding and playback; col. 36, lines

10 – 18]. Tang does not specifically disclose the device driving system including

additional driver means interposed between the operating system and the said installed

driver and configured to interface directly with at least said operating system.

However, Keys teaches the device driving system including additional driver

means [paragraph 0017] interposed between the operating system [paragraph 0015]

and the said installed driver and configured to interface directly with at least said

operating system [paragraph 0019].

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify the invention of Tang to incorporate the features of Keys.

One of ordinary skill in the art would have been motivated to make the combination

because this provides the ability to intercept, inspect, and modify the requests between

the client drivers and the bus driver [paragraph 0015 of Keys].

10.   As to claim 8, Tang as modified teaches a driver means implemented in software

[Windows Driver Model; col. 35, lines 28 – 41 of Tang] and adaptable for positioning

between an operating system [col. 47, lines 25 – 38 of Tang] and at least one installed

audio driver provided with the operating system [WDM Comm Class Driver supports

other legacy comm functions; col. 99, line 65 – col. 100, line 6 of Tang] and coupled to

an audio card device [col. 19, lines 25 – 36 of Tang], said at least one installed audio

driver configured to be responsive to selected communications to cause the audio card

device to demonstrate predetermined functionality [col. 35, lines 7 – 30 of Tang]

envisaged by the operating system provider [col. 14, lines 10 – 26 of Tang], the driver

means configured to:

receive a first communications for an operation directly from the operating

system [paragraph 0015 of Keys] at a first input interface between the operating system

[paragraph 0019] and the driver means [col. 18, lines 41 – 50 of Tang and paragraph

0017 of Keys]; and

forward a second communication for the operation over a first output interface to

a first of the at least one installed audio driver [an ActiveDSP audio renderer filter

accepts PCM, MPEG, or AC-3 audio streams, and passes the streams through

DirectDSP/DirectDSP HAL to VSP hardware for decoding and playback; col. 36, lines

10 – 18 of Tang], wherein the second communication causes the driver to generate

functionality envisaged by the operating system provider when the coupled audio card is

a USB audio card supporting the predetermined functionality [col. 48, lines 16 – 40 of

Tang] and to generate functionality not envisaged by the operating system provider

when the coupled audio card has 3D positioning of sound functionality that is beyond

the predetermined functionality [second VSP block 620 virtualizes 3D audio; col. 110,

lines 40 – 55 of Tang].

11.   As to claim 9, Tang as modified teaches a supplemental device driver [Windows

Driver Model; col. 35, lines 28 – 41 of Tang] implemented in software and adaptable for

positioning between an operating system [col. 47, lines 25 – 38 of Tang] and at least

one installed device driver provided with the operating system [WDM Comm Class

Driver supports other legacy comm functions; col. 99, line 65 – col. 100, line 6 of Tang]

and coupled to a first hardware device [col. 19, lines 25 – 36 of Tang], said at least one

installed driver configured to be responsive to selected communications to cause the

first hardware device to demonstrate predetermined functionality [col. 35, lines 7 – 30 of

Tang] envisaged by the operating system provider [col. 14, lines 10 – 26 of Tang], the

supplemental device driver configured to:

receive a first communications for an operation directly from the operating

system [paragraph 0015 of Keys] at a first input interface between the operating system

[paragraph 0019] and the supplemental device driver [col. 18, lines 41 – 50 of Tang

and paragraph 0017 of Keys]; and

forward a second communication for the operation over a first output interface to

a first of the at least one installed driver [an ActiveDSP audio renderer filter accepts

PCM, MPEG, or AC-3 audio streams, and passes the streams through

DirectDSP/DirectDSP HAL to VSP hardware for decoding and playback; col. 36, lines

10 – 18 of Tang], wherein the second communication causes the driver to generate

functionality envisaged by the operating system provider when the coupled hardware

device supports the predetermined functionality [col. 48, lines 16 – 40 of Tang] and to

generate functionality not envisaged by the operating system provider when the coupled

hardware device has functionality beyond the predetermined functionality [second VSP

block 620 virtualizes 3D audio; col. 110, lines 40 – 55 of Tang].

12.   As to claim 2, Tang teaches the additional driver means is also configured to

interface directly with said installed driver, thereby enabling continued and unchanged

use of said at least one hardware device of predetermined functionality [col. 47, lines 25

– 38].

13.   As to claim 3, Tang teaches the additional driver means is additionally configured

to interface with a further driver which is configured to drive an additional hardware

device [col. 110, lines 9 – 53].

14.   As to claim 4, Tang teaches the additional driver means is additionally configured

to interface with a further driver which is configured to drive an additional hardware

device [col. 110, lines 9 – 53].

15.   As to claim 5, Tang teaches the at least one hardware device comprise audio

devices [col. 48, lines 16 – 40].

16.   As to claim 6, Tang teaches the at least one hardware device comprises USB

audio hardware and the additional device comprises hardware associated, with 3D

positioning of sounds or environmental effects [col. 110, lines 40 – 55].

17.   As to claim 7, Tang teaches the operating system is the Windows operating

system and the said installed driver comprises a Windows Driver Model (WDM) audio

driver [col. 35, lines 16 – 41].

18.   As to claim 10, Tang teaches the at least one driver comprises a second driver

coupled to a second hardware device and the driving means is further configured to

forward the second communication to the second driver [col. 36, lines 10 – 18].

19.   As to claim 11, Tang teaches the first hardware device is a USB audio card

having predetermined functionality envisaged by the operating system and the second

hardware device comprises hardware associated with is 3D positioning of sounds

having functionality beyond the predetermined functionality [second VSP block 620

virtualizes 3D audio; col. 110, lines 40 – 55].

20.   As to claim 12, Tang teaches the hardware device is a USB audio card having

predetermined functionality envisaged by the operating system [col. 48, lines 16 – 40].

21.   As to claim 13, Tang teaches the hardware device comprises hardware

associated with is 3D positioning of sounds having functionality beyond the

predetermined functionality [col. 110, lines 40 – 55].

CONTACT INFORMATION

22.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768.

The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li B. Zhen
Primary Examiner
Art Unit 2194

/Li B. Zhen/
Primary Examiner, Art Unit 2194